

WHAT IS CLAIMED IS:

1. An optical cursor control device having a worktable and an optical mouse moved on the worktable by an operator, the optical mouse comprising:

5 a case;

a light guide disposed at a sidewall of the case to introduce external lights into the case;

an optical sensor disposed in the case to detect output lights of the light guide; and

10 a printed circuit board with electronic parts processing an output signal of the optical sensor to generate an output signal that corresponds to a position of the case.

2. The optical cursor control device according to claim 1, wherein the
15 light guide is a prism.

3. The optical cursor control device according to claim 2, wherein the prism has a first area that accepts lights reflecting from a surface of the worktable adjacent to the case and a second area that introduces lights passing
20 through the first area into the optical sensor.

4. The optical cursor control device according to claim 3, wherein the prism further comprising light concentrators disposed at the first and second areas, and the light concentrators increase light intensities passing through the
25 light concentrators.

5. The optical cursor control device according to claim 4, wherein the light concentrators are convex lenses.

5 6. The optical cursor control device according to claim 1, further comprising:

a switch module mounted on the printed circuit board; and

a button disposed on a top of the case to turn on or off the switch module.

10 7. The optical cursor control device according to claim 1, wherein the light guide have a light concentrating surface that accept external lights of the case and an illuminating surface irradiating lights penetrating the light concentrating surface onto the surface of the worktable through an opening
15 formed in a lower panel of the case, the illuminating surface having an area smaller than that of the light concentrating surface and the optical sensor detecting lights reflected from the surface of the worktable.

8. The optical cursor control device according to claim 7 further
20 comprises a light emitting device installed in the case, wherein the light emitting device is automatically or manually turned on and lights from the light emitting device are irradiated onto the surface of the worktable through the opening.

9. An optical cursor control device having a light concentrating pad and

an optical mouse moved on the light concentrating pad by an operator, the light concentrating pad comprising:

a light concentrating plate;

an optical wave guide for passing light reflected from the light
5 concentrating plate;

a lower reflecting plate attached to a bottom of the optical wave guide for upwardly reflecting the light introduced into the optical wave guide; and

an upper transparent plate attached to a top of the optical wave guide for passing the light reflected from the lower reflecting plate.

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10. The optical cursor control device according to claim 9, wherein the upper transparent plate includes regular patterns drawn on a surface thereof.

11. The optical cursor control device according to claim 9, wherein the

15 optical mouse comprising:

a case including a lower panel, the lower panel having an opening;

an optical sensor mounted inside the case for sensing reflected light introduced into the case through the opening; and

a printed circuit board for processing a signal outputted from the
20 optical sensor to generate an output signal that corresponds to a position of the case.

12. The optical cursor control device according to claim 11, wherein the optical mouse further comprising:

a switch module disposed on the printed circuit board; and
a button disposed at the top surface of the case to turn on or off the
switch module.

5 13. An optical cursor control device having a light concentrating pad,
and an optical mouse moved on the light concentrating pad by an operator, the
light concentrating pad comprising:

a light source;

an optical wave guide for passing light emitted from the light source;

10 a lower reflecting plate attached to a bottom of the optical wave guide
for upwardly reflecting the light introduced into the optical wave guide; and

an upper transparent plate attached to a top of the optical wave guide
for passing the light reflected from the lower reflecting plate.

15 14. The optical cursor control device according to claim 13, wherein
the upper transparent plate includes regular patterns drawn on a surface thereof.

15. The optical cursor control device according to claim 13, wherein
the optical mouse comprising:

20 a case including a lower panel with an opening;

an optical sensor mounted inside the case for sensing reflected light
introduced through the opening; and

a printed circuit board with electronic parts processing a signal
outputted from the optical sensor to generate an output signal that corresponds

to a position of the case.

16. The optical cursor control device according to claim 15, wherein the optical mouse further comprising:

5 a switch module disposed on the printed circuit board; and

a button disposed at the top surface of the case to turn on or off the switch module.

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